

09/728,192

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS**

Claims 1-10 (Cancelled)

11. (Currently Amended) A method of operating a network having a plurality of nodes, comprising:

maintaining in a receiving node a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node;

receiving a HELLO message containing an address of a new sending node;

transmitting a NEIGHBOR message that includes an address of the receiving node to said new sending node;

receiving a NEIGHBOR ACK message from said new sending node;

updating said neighbor table to reflect discovery of said new sending node and communication status of said new sending node; and

transmitting at least one HELLO message comprising only a list of neighbor nodes that have communication status changes, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a lost status, wherein a neighbor node is determined to be in the lost status when a HELLO message containing the address of that neighbor node has not been heard by the receiving node in a predetermined period of time.

12. - 14. (Cancelled)

15. (Currently Amended) The method of claim 44 11, wherein the predetermined period of time corresponds to a HELLO-INTERVAL period multiplied by a

09/28,192

predetermined number K.

16. (Currently Amended) The method of claim 44 11, further comprising subsequently transmitting at least one HELLO message containing the address of the receiving node but not the address of a neighbor node that was previously in the list of neighbor nodes in the lost state.

17. (Currently Amended) The method of claim 44 11, further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.

18. (Currently Amended) The method of claim 44 11, further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a symmetric status.

19. (Currently Amended) The method of claim 44 11, further comprising subsequently transmitting at least one HELLO message containing a list of neighbor nodes in a symmetric status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.

20. (Currently Amended) A network having a plurality of nodes, comprising:

a new sending node; and

a receiving node having a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node, wherein said receiving node receives a HELLO message from said new sending node containing an address of said new sending node, wherein said receiving node transmits a NEIGHBOR message that includes an address of the receiving node to said new sending node, wherein said receiving node receives a NEIGHBOR ACK message

09/728,192

from said new sending node, wherein said receiving node updates said neighbor table to reflect discovery of said new sending node and communication status of said new sending node, ~~and~~ wherein said receiving node transmits at least one HELLO message comprising only a list of neighbor nodes that have communication status changes, and wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a lost status, wherein a neighbor node is determined to be in the lost status when a HELLO message containing the address of that neighbor node has not been heard by the receiving node in a predetermined period of time.

21. - 23. (Cancelled)

24. (Currently Amended) The network of claim ~~23~~ 20, wherein the predetermined period of time corresponds to a HELLO-INTERVAL period multiplied by a predetermined number K.

25. (Currently Amended) The network of claim ~~23~~ 20, wherein said receiving node subsequently transmits at least one HELLO message containing the address of the receiving node but not the address of a neighbor node that was previously in the list of neighbor nodes in the lost state.

26. (Currently Amended) The network of claim ~~23~~ 20, wherein said receiving node subsequently transmits at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.

27. (Currently Amended) The network of claim ~~23~~ 20, wherein said receiving node subsequently transmits at least one HELLO message containing a list of neighbor nodes in a lost status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a symmetric status.

09/728,192

28. (Currently Amended) The network of claim ~~23~~ 20, wherein said receiving node subsequently transmits at least one HELLO message containing a list of neighbor nodes in a symmetric status, wherein that list of neighbor nodes includes a neighbor node that was in a previous list of neighbor nodes in a heard status.

29. (New) A method of operating a network having a plurality of nodes, comprising:  
maintaining in a receiving node a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node;

receiving a HELLO message containing an address of a new sending node;

transmitting a NEIGHBOR message that includes an address of the receiving node to said new sending node;

receiving a NEIGHBOR ACK message from said new sending node;

updating said neighbor table to reflect discovery of said new sending node and communication status of said new sending node; and

transmitting at least one HELLO message comprising only a list of neighbor nodes that have communication status changes, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a heard status, wherein neighbor nodes in the heard status have been heard by the receiving node but have not been determined to have heard a previous HELLO message from the receiving node.

30. (New) A method of operating a network having a plurality of nodes, comprising:  
maintaining in a receiving node a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node;

receiving a HELLO message containing an address of a new sending node;

transmitting a NEIGHBOR message that includes an address of the receiving node to said new sending node;

09/728,192

receiving a NEIGHBOR ACK message from said new sending node;

updating said neighbor table to reflect discovery of said new sending node and communication status of said new sending node; and

transmitting at least one HELLO message comprising only a list of neighbor nodes that have communication status changes, wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a symmetric status, wherein neighbor nodes in the symmetric status have been heard by the receiving node and have been determined to have heard a previous HELLO message from the receiving node.

31. (New) A network having a plurality of nodes, comprising:

a new sending node; and

a receiving node having a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node, wherein said receiving node receives a HELLO message from said new sending node containing an address of said new sending node, wherein said receiving node transmits a NEIGHBOR message that includes an address of the receiving node to said new sending node, wherein said receiving node receives a NEIGHBOR ACK message from said new sending node, wherein said receiving node updates said neighbor table to reflect discovery of said new sending node and communication status of said new sending node, wherein said receiving node transmits at least one HELLO message comprising only a list of neighbor nodes that have communication status changes, and wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a heard status, wherein neighbor nodes in the heard status have been heard by the receiving node but have not been determined to have heard a previous HELLO message from the receiving node.

32. (New) A network having a plurality of nodes, comprising:

09/728,192

a new sending node; and

a receiving node having a neighbor table comprised of each known neighbor node of the receiving node and the communication status of each known neighbor node, wherein said receiving node receives a HELLO message from said new sending node containing an address of said new sending node, wherein said receiving node transmits a NEIGHBOR message that includes an address of the receiving node to said new sending node, wherein said receiving node receives a NEIGHBOR ACK message from said new sending node, wherein said receiving node updates said neighbor table to reflect discovery of said new sending node and communication status of said new sending node, wherein said receiving node transmits at least one HELLO message comprising only a list of neighbor nodes that have communication status changes, and wherein each of said at least one HELLO message includes the address of the receiving node and a list of neighbor nodes that have their communication status changed to a symmetric status, wherein neighbor nodes in the symmetric status have been heard by the receiving node and have been determined to have heard a previous HELLO message from the receiving node.